

REMARKS

Examiner Jean E. Lesperance is thanked for the thorough examination and search of the subject Patent Application.

Claims 1, 9, 17-19, 27, and Claim 35 have been amended and new Claims 43-104 have been added.

All Claims are believed to be in condition for Allowance, and that is so requested.

The reference numbers in Claims 17 and 18 have been corrected to remove typos.

17.(currently amended) The system of claim 69 wherein said MLA common groups comprise two MLA common sub-groups.

18. (currently amended) The system of claim 69 wherein said MLA common groups comprise three MLA common sub-groups.

Claim 35 has been amended, an omitted text line has been added:

35. (currently amended) A method to achieve reduced resistance of the connections between the display controller device and the MLA common sub-groups of the display unit of an MLA LCD display system avoiding differences of contrast between adjacent lines of the LCD display unit comprising the following steps:

providing an MLA LCD display unit and a MLA LCD display controller device, wherein a defined number of MLA common sub-groups is bundled into a MLA common group;

define number of lines per MLA common sub-group;

define number of MLA common sub-groups per MLA common group; and interlace lines of MLA common groups alternately from both sides of the MLA display control device to the correspondent sides of the MLA display unit in a way that the uppermost MLA common group is driven from a first side of the MLA display control device, the second uppermost MLA common group is driven from the side opposite to said first side, the third uppermost MLA common group is driven from said first side again and so on.

Reconsideration of the rejection of claims 1-3, 9-11, 17-22, 27-29, and 35-37 under 35 U.S.C. 102(b) as being unpatentable over Leroux et al. (US 5,512,915), hereinafter Leroux, is requested, based on the amended claims and on the following remarks:

Claim 1 of the claimed invention teaches:

1. (original) A Multi Line Addressing (MLA) Liquid Crystal Display (LCD) system comprising:
 - a display unit; and
 - a display controller device, wherein the lines for each common sub-group, **each common sub-group comprising more than one consecutive lines**, between said display unit and said display controller device are interlaced from top to bottom of the display unit in a way that a first common **sub-group** is driven from a first side of the display controller device, a second common **sub-group** is driven from the opposite to first side of the display controller device, a third **sub-group** is driven from the first side again, a fourth common sub-group is driven from said opposite side again, and so on until the bottom of the display unit is reached.

Leroux teaches (col. 5, lines 7-13):

"According to the invention during a first half of the frame time, each row of a first parity type of the first screen part 10 is simultaneously selected with

a row of a second parity type of the second part 12. During a second half of the screen time, each row of the second parity type of the first part 10 is selected simultaneously with a row of the first parity type of the second part 12."

Applicant believes that the claimed invention is different to the invention of Leroux because Leroux is not using common subgroups wherein "**each common subgroup comprising more than one consecutive lines**" as the claimed invention does. Leroux shows in Fig. 2 and Fig. 3 only single lines "subdivided into successive even and uneven rows" connected to the display from the right and from the left while the claimed invention teaches "common subgroups comprising more than one consecutive lines" wherein the **subgroups** (and not single lines as disclosed by Leroux) are interlaced from right and left.

Claims 2 and 3 are dependent claims upon their base claim 1 which is believed to be patentable according the arguments outlined above.

The amended claim 9 discloses:

9. (currently amended) A Multi Line Addressing (MLA) Liquid Crystal Display (LCD) system comprising:
 - a display unit; and
 - a display controller device, wherein a number of MLA common sub-groups, each common sub-group comprising more than one consecutive lines, are bundled into MLA common groups and the lines for each common group between said display unit and said display controller device are interlaced from top to bottom of the display unit in a way that a first MLA common group is driven from a first side of the display controller device, a second common group is driven from the opposite to first side of the display controller device, a third common group is driven from the first side again, a fourth common group is driven from said opposite side again, and so on until the bottom of the display unit is reached.

The same arguments apply for claim 9 as outlined above for claim 1. Applicant believes that the claimed invention is different to the invention of Leroux because Leroux is not using common subgroups wherein "**each common sub-group comprising more than one consecutive lines**" as the claimed invention does. Leroux shows in Fig. 2 and Fig. 3 only single lines "subdivided into successive even and uneven rows" connected to the display from the right and from the left while the claimed invention teaches "common subgroups comprising more than one consecutive lines" wherein the **subgroups** (and not single lines as disclosed by Leroux) are interlaced. from right and left.

Claims 10-11 and 17-18 are dependent claims upon their base claim 9 which is believed to be patentable according the arguments outlined above.

The amended claim 19 discloses:

19.(currently amended) A Liquid Crystal Display (LCD) system comprising:
a display unit; and
a display controller device, wherein a number of consecutive common signal lines are bundled into common signal groups and the lines for each common signal group between said display unit and said display controller device are interlaced from top to bottom of the display unit in a way that a first common signal group is driven from a first side of the display controller device, a second common signal group is driven from the opposite to first side of the display controller device, a third common signal group is driven from the first side again, a fourth common signal group is driven from said opposite side again, and so on until the bottom of the display unit is reached.

Similar arguments apply for claim 19 as outlined above for claims 1 and 9.

Applicant believes that the claimed invention is different to the invention of Leroux

because Leroux does not disclose “a display controller device, wherein a number of **consecutive common signal lines** are bundled into **common signal groups** and the lines for each common signal group between said display unit and said display controller device are interlaced from top to bottom of the display unit...” as the claimed invention does. Leroux shows in Fig. 2 and Fig. 3 only single lines “subdivided into successive even and uneven rows” connected to the display from the right and from the left while the claimed invention teaches “common signal groups comprising more than one consecutive lines” wherein the **common signal groups** (and not single lines as disclosed by Leroux) are interlaced. from right and left.

Claims 20-22 are dependent claims upon their base claim 19 which is believed to be patentable according the arguments outlined above.

The amended claim 27 discloses:

27.(currently amended) A method to achieve reduced resistance of the connections between the display controller device and the MLA common sub-groups of the display unit of an MLA LCD display system avoiding differences of contrast between adjacent lines of the LCD display unit comprising the following steps:

providing an MLA LCD display unit and a MLA LCD display controller device;

define number of lines per MLA common sub-group, each common sub-group comprising more than one consecutive lines,; and

interlace lines of MLA common sub-groups alternately from both sides of the display control device to the correspondent sides of the display unit in a way that the uppermost MLA sub-group is driven from a first side of the MLA display control device, the second uppermost MLA sub-group is driven from the side opposite to said first side, the third uppermost MLA sub-group is driven from said first side again and so on.

The same arguments apply for claim 27 as outlined above for claims 1 and 9.

Applicant believes that the claimed invention is different to the invention of Leroux because Leroux is not using common subgroups wherein "**each common sub-group comprising more than one consecutive lines**" as the claimed invention does. Leroux shows in Fig. 2 and Fig. 3 only single lines "subdivided into successive even and uneven rows" connected to the display from the right and from the left while the claimed invention teaches "common subgroups comprising more than one consecutive lines" wherein the **subgroups** (and not single lines as disclosed by Leroux) are interlaced. from right and left.

Claims 28-29 are dependent claims upon their base claim 27 which is believed to be patentable according the arguments outlined above.

The amended claim 35 discloses:

35.(currently amended) A method to achieve reduced resistance of the connections between the display controller device and the MLA common sub-groups of the display unit of an MLA LCD display system avoiding differences of contrast between adjacent lines of the LCD display unit comprising the following steps:

providing an MLA LCD display unit and a MLA LCD display controller device, wherein a defined number of MLA common sub-groups is bundled into a MLA common group;

define number of consecutive lines per MLA common sub-group;

define number of MLA common sub-groups per MLA common group; and

interlace lines of MLA common groups alternately from both sides of the MLA display control device to the correspondent sides of the MLA display unit in a way that the uppermost MLA common group is driven from a first side of the MLA display control device, the second uppermost MLA common group is driven from the side opposite to said first side, the third uppermost MLA common group is driven from said first side again and so on.

Similar arguments apply for claim 35 as outlined above for the other claims. Applicant believes that the claimed invention is different to the invention of Leroux because Leroux does not disclose "wherein a defined number of MLA common sub-groups is bundled into a MLA common group" as the claimed invention does. Furthermore Leroux does not disclose "define number of consecutive lines per MLA common sub-group" as the claimed invention does. Leroux shows in Fig. 2 and Fig. 3 only single lines "subdivided into successive even and uneven rows" connected to the display from the right and from the left while the claimed invention teaches "interlace lines of MLA common groups alternately from both sides of the MLA display control device" wherein the **MLA common groups** (and not single lines as disclosed by Leroux) are interlaced. from right and left.

Claims 36-37 are dependent claims upon their base claim 35 which is believed to be patentable according the arguments outlined above.

Reconsideration of the rejection of claims 4, 5,12, 13, 23, 30, 31, 38 and 39 under 35 U.S.C. 103(a) as being unpatentable over Leroux et al. (US 5,512,915) , in view of Hinata et al. (U.S. 6,888,606 is requested, based and on the following remarks:

Claims 4, 5,12, 13, 23, 30, 31, 38 and 39 are dependent claims upon their base claim 1, or respective base claims 9, 19, 27, and 3535 which are believed to be patentable according the arguments outlined above.

New claims 43-104 have been added without adding new matters.

Applicants have reviewed the prior art made of record and not relied upon and have discussed their impact on the present invention above.

Allowance of all Claims is requested.

It is requested that should the Examiner not find that the Claims are now Allowable that the Examiner call the undersigned at 845-452-5863 to overcome any problems preventing allowance.

Respectfully submitted,



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